

```
Select Windows PowerShell
PS C:\Users\Faizan> minikube start --nodes 2 -p multinode-demo
M0118 21:31:14.082112 4804 main.go:291] Unable to resolve the current Docker CLI context "default": context "default": context not
found: open C:\Users\Faizan\.docker\contexts\meta\37a8ee1ce19687d132fe29051dca629d164e2c4958ba141d5f4133a33f0688f\meta.json: The syst
em cannot find the path specified.
* [multinode-demo] minikube v1.32.0 on Microsoft Windows 10 Pro Education 10.0.19045.3930 Build 19045.3930
* Automatically selected the docker driver
* Using Docker Desktop driver with root privileges
* Starting control plane node multinode-demo in cluster multinode-demo
* Pulling base image ...
* Creating docker container (CPUs=2, Memory=2200MB) ...
* Preparing Kubernetes v1.28.3 on Docker 24.0.7 ...
  - Generating certificates and keys ...
  - Booting up control plane ...
  - Configuring RBAC rules ...
* Configuring CNI (Container Networking Interface) ...
* Verifying Kubernetes components...
  - Using image gcr.io/k8s-minikube/storage-provisioner:v5
* Enabled addons: storage-provisioner, default-storageclass
* Starting worker node multinode-demo-m02 in cluster multinode-demo
* Pulling base image ...
* Creating docker container (CPUs=2, Memory=2200MB) ...
* Found network options:
  - NO_PROXY=192.168.58.2
  - NO_PROXY=192.168.58.2
* Preparing Kubernetes v1.28.3 on Docker 24.0.7 ...
  - env NO_PROXY=192.168.58.2
* Verifying Kubernetes components...
* Done! kubect1 is now configured to use "multinode-demo" cluster and "default" namespace by default
PS C:\Users\Faizan>
```

```
Select Windows PowerShell
PS C:\Users\Faizan> minikube start --nodes 2 -p multinode-demo
M0118 21:31:14.082112 4804 main.go:291] Unable to resolve the current Docker CLI context "default": context "default": context not
found: open C:\Users\Faizan\.docker\contexts\meta\37a8ee1ce19687d132fe29051dca629d164e2c4958ba141d5f4133a33f0688f\meta.json: The syst
em cannot find the path specified.
* [multinode-demo] minikube v1.32.0 on Microsoft Windows 10 Pro Education 10.0.19045.3930 Build 19045.3930
* Automatically selected the docker driver
* Using Docker Desktop driver with root privileges
* Starting control plane node multinode-demo in cluster multinode-demo
* Pulling base image ...
* Creating docker container (CPUs=2, Memory=2200MB) ...
* Preparing Kubernetes v1.28.3 on Docker 24.0.7 ...
  - Generating certificates and keys ...
  - Booting up control plane ...
  - Configuring RBAC rules ...
* Configuring CNI (Container Networking Interface) ...
* Verifying Kubernetes components...
  - Using image gcr.io/k8s-minikube/storage-provisioner:v5
* Enabled addons: storage-provisioner, default-storageclass
* Starting worker node multinode-demo-m02 in cluster multinode-demo
* Pulling base image ...
* Creating docker container (CPUs=2, Memory=2200MB) ...
* Found network options:
  - NO_PROXY=192.168.58.2
  - NO_PROXY=192.168.58.2
* Preparing Kubernetes v1.28.3 on Docker 24.0.7 ...
  - env NO_PROXY=192.168.58.2
* Verifying Kubernetes components...
* Done! kubect1 is now configured to use "multinode-demo" cluster and "default" namespace by default
PS C:\Users\Faizan> kubectl get nodes
NAME                STATUS    ROLES    AGE   VERSION
multinode-demo      Ready     control-plane 4m37s v1.28.3
multinode-demo-m02  Ready    <none>    2m17s v1.28.3
PS C:\Users\Faizan>
```

```
Select Windows PowerShell
* Preparing Kubernetes v1.28.3 on Docker 24.0.7 ...
  - Generating certificates and keys ...
  - Booting up control plane ...
  - Configuring RBAC rules ...
* Configuring CNI (Container Networking Interface) ...
* Verifying Kubernetes components...
  - Using image gcr.io/k8s-minikube/storage-provisioner:v5
* Enabled addons: storage-provisioner, default-storageclass
* Starting worker node multinode-demo-m02 in cluster multinode-demo
* Pulling base image ...
* Creating docker container (CPUs=2, Memory=2200MB) ...
* Found network options:
  - NO_PROXY=192.168.58.2
  - NO_PROXY=192.168.58.2
* Preparing Kubernetes v1.28.3 on Docker 24.0.7 ...
  - env NO_PROXY=192.168.58.2
* Verifying Kubernetes components...
* Done! kubect1 is now configured to use "multinode-demo" cluster and "default" namespace by default
PS C:\Users\Faizan> kubectl get nodes
NAME                STATUS    ROLES    AGE   VERSION
multinode-demo      Ready     control-plane 4m37s v1.28.3
multinode-demo-m02  Ready    <none>    2m17s v1.28.3
PS C:\Users\Faizan> minikube status --multinode-demo
M0118 21:38:16.319271 9832 main.go:291] Unable to resolve the current Docker CLI context "default": context "default": context not
found: open C:\Users\Faizan\.docker\contexts\meta\37a8ee1ce19687d132fe29051dca629d164e2c4958ba141d5f4133a33f0688f\meta.json: The syst
em cannot find the path specified.
multinode-demo
type: Control Plane
host: Running
kubect1: Running
apiserver: Running
kubeconfig: Configured

multinode-demo-m02
type: Worker
host: Running
kubect1: Running
PS C:\Users\Faizan>
```

```
Select Windows PowerShell

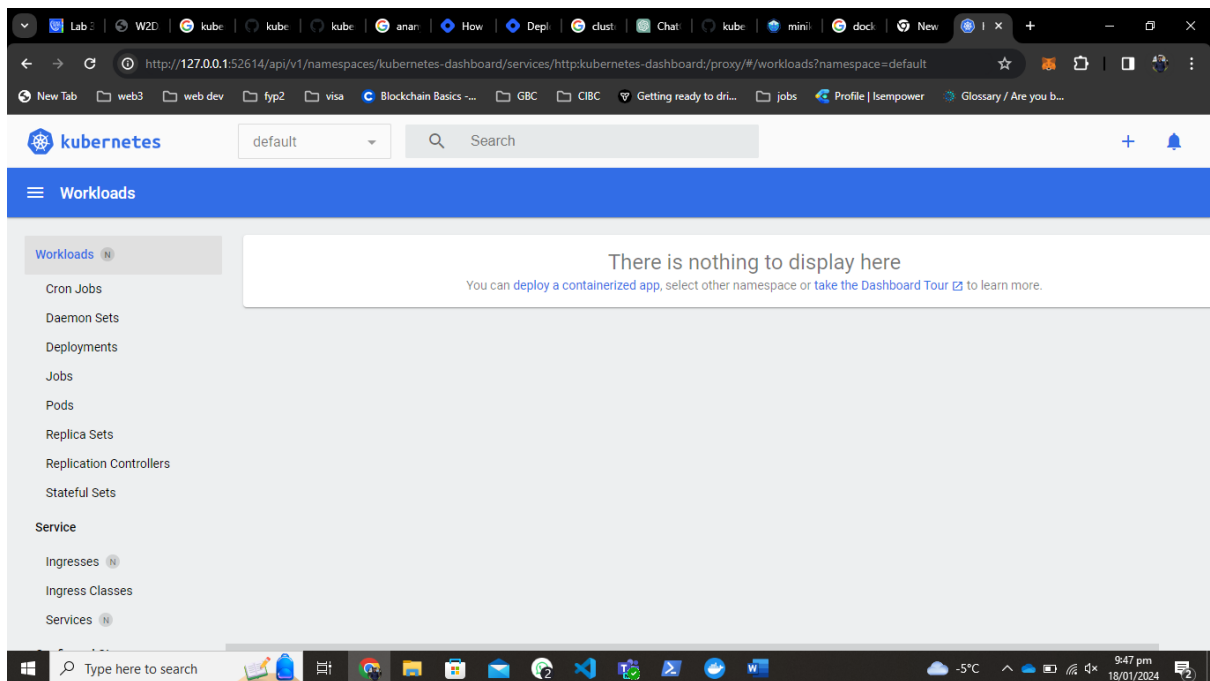
multinode-demo
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured

multinode-demo-m02
type: Worker
host: Running
kubelet: Running

PS C:\Users\Faizan> minikube dashboard -p multinode-demo
W0118 21:42:04.642477 3508 main.go:291] Unable to resolve the current Docker CLI context "default": context "default": context not
found: open C:\Users\Faizan\docker\contexts\meta\37a8eec1ce19687d132fe29851dca629d164e2c4958ba141d5f4133a3f06688f\meta.json: The syst
em cannot find the path specified.
* Enabling dashboard ...
  - Using image docker.io/kubernetes/dashboard:v2.7.0
  - Using image docker.io/kubernetes/metrics-scraper:v1.0.8
* Some dashboard features require the metrics-server addon. To enable all features please run:

    minikube -p multinode-demo addons enable metrics-server

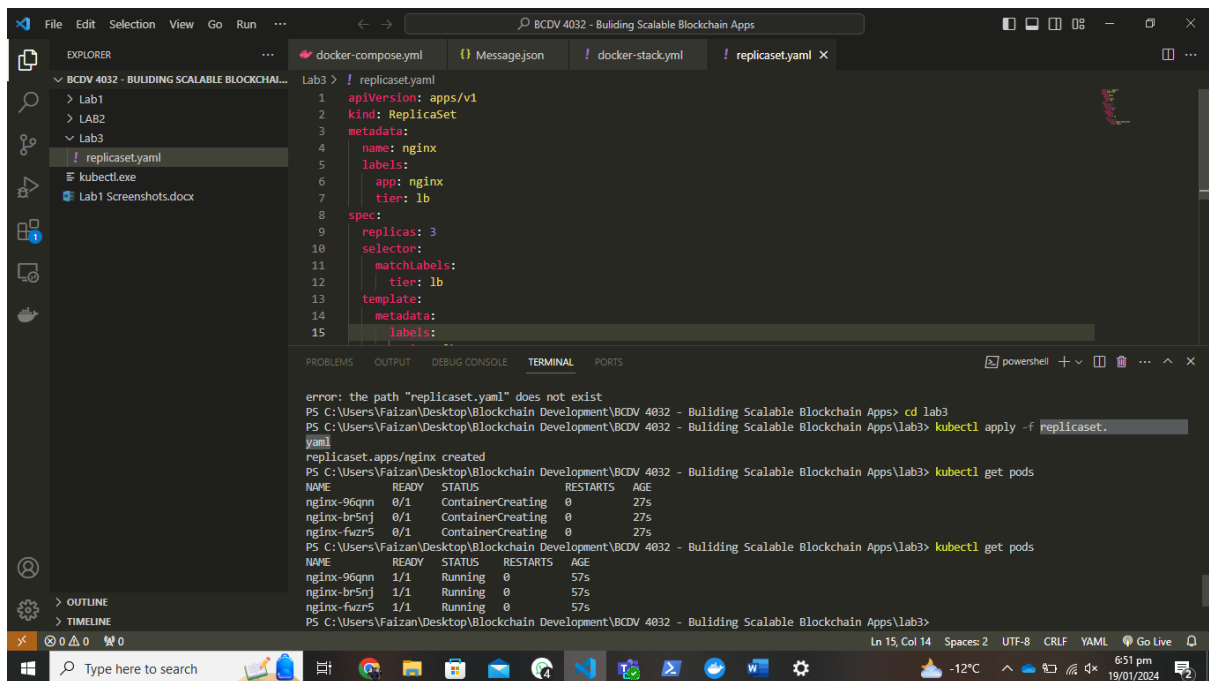
* Verifying dashboard health ...
* Launching proxy ...
* Verifying proxy health ...
* Opening http://127.0.0.1:52614/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/ in your default bro
wser...
```



```
Select Windows PowerShell

PS C:\Users\Faizan> minikube stop -p multinode-demo
W0118 21:51:06.305812 11296 main.go:291] Unable to resolve the current Docker CLI context "default": context "default": context not
found: open C:\Users\Faizan\docker\contexts\meta\37a8eec1ce19687d132fe29851dca629d164e2c4958ba141d5f4133a3f06688f\meta.json: The syst
em cannot find the path specified.
* Stopping node "multinode-demo" ...
* Powering off "multinode-demo" via SSH ...
* Stopping node "multinode-demo-m02" ...
* Powering off "multinode-demo-m02" via SSH ...
* 2 nodes stopped.
PS C:\Users\Faizan> minikube delete --all
W0118 21:51:47.381955 2996 main.go:291] Unable to resolve the current Docker CLI context "default": context "default": context not
found: open C:\Users\Faizan\docker\contexts\meta\37a8eec1ce19687d132fe29851dca629d164e2c4958ba141d5f4133a3f06688f\meta.json: The syst
em cannot find the path specified.
* Deleting "minikube" in docker ...
* Removing C:\Users\Faizan\minikube\machines\minikube ...
* Removed all traces of the "minikube" cluster.
* Deleting "multinode-demo" in docker ...
* Removing C:\Users\Faizan\minikube\machines\multinode-demo ...
* Removing C:\Users\Faizan\minikube\machines\multinode-demo-m02 ...
* Removed all traces of the "multinode-demo" cluster.
* Successfully deleted all profiles
PS C:\Users\Faizan>
```

Replicaset.yaml



```
File Edit Selection View Go Run ... BCDV 4032 - Buliding Scalable Blockchain Apps
```

EXPLORER

- BCDV 4032 - BUILDING SCALABLE BLOCKCHAL...
- Lab1
- Lab2
- Lab3
 - ! replicaset.yaml
 - kubectl.exe
 - Lab1 Screenshots.docx

Lab3 > ! replicaset.yaml

```
1 apiVersion: apps/v1
2 kind: ReplicaSet
3 metadata:
4   name: nginx
5   labels:
6     app: nginx
7     tier: lb
8 spec:
9   replicas: 3
10  selector:
11    matchLabels:
12      tier: lb
13  template:
14    metadata:
15      labels:
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

error: the path "replicaset.yaml" does not exist

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Buliding Scalable Blockchain Apps> cd lab3

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Buliding Scalable Blockchain Apps\lab3> kubectl apply -f replicaset.yaml

replicaset.apps/nginx created

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Buliding Scalable Blockchain Apps\lab3> kubectl get pods

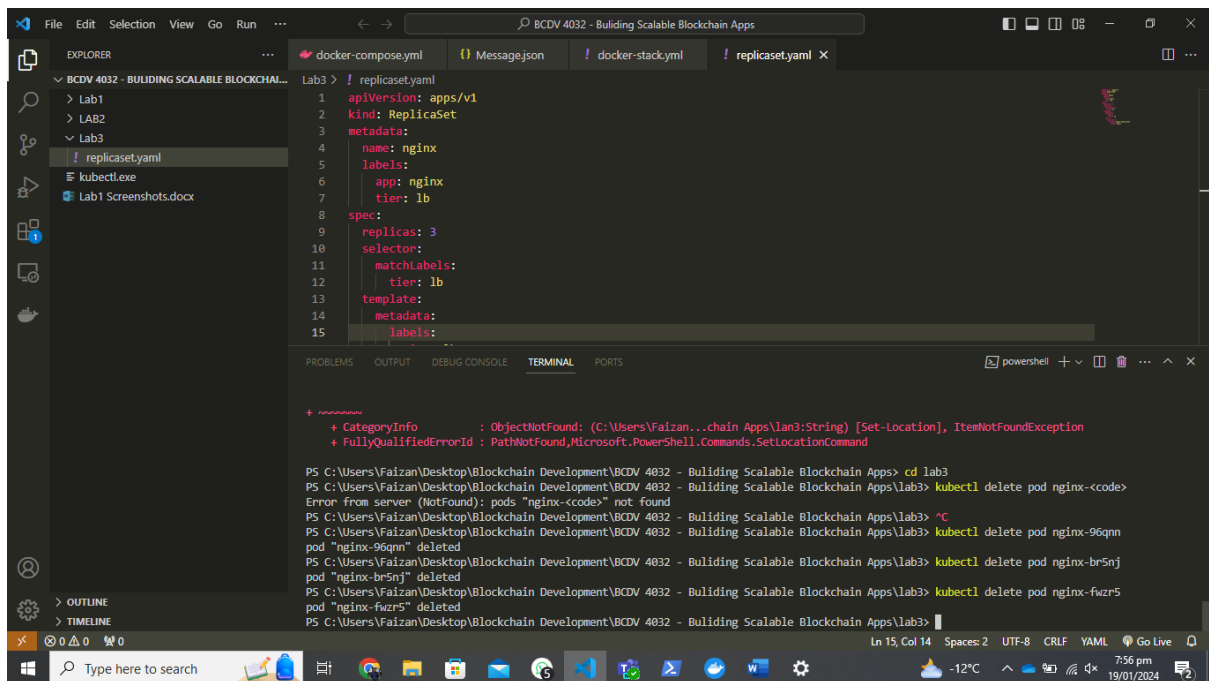
NAME	READY	STATUS	RESTARTS	AGE
nginx-96qnn	0/1	ContainerCreating	0	27s
nginx-br5nj	0/1	ContainerCreating	0	27s
nginx-fwzr5	0/1	ContainerCreating	0	27s

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Buliding Scalable Blockchain Apps\lab3> kubectl get pods

NAME	READY	STATUS	RESTARTS	AGE
nginx-96qnn	1/1	Running	0	57s
nginx-br5nj	1/1	Running	0	57s
nginx-fwzr5	1/1	Running	0	57s

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Buliding Scalable Blockchain Apps\lab3>

Ln 15, Col 14 Spaces: 2 UTF-8 CRLF YAML Go Live



```
File Edit Selection View Go Run ... BCDV 4032 - Buliding Scalable Blockchain Apps
```

EXPLORER

- BCDV 4032 - BUILDING SCALABLE BLOCKCHAL...
- Lab1
- Lab2
- Lab3
 - ! replicaset.yaml
 - kubectl.exe
 - Lab1 Screenshots.docx

Lab3 > ! replicaset.yaml

```
1 apiVersion: apps/v1
2 kind: ReplicaSet
3 metadata:
4   name: nginx
5   labels:
6     app: nginx
7     tier: lb
8 spec:
9   replicas: 3
10  selector:
11    matchLabels:
12      tier: lb
13  template:
14    metadata:
15      labels:
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

+ CategoryInfo : ObjectNotFound: (C:\Users\Faizan...chain Apps\lan3:String) [Set-Location], ItemNotFoundException

+ FullyQualifiedErrorId : PathNotFound,Microsoft.PowerShell.Commands.SetLocationCommand

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Buliding Scalable Blockchain Apps> cd lab3

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Buliding Scalable Blockchain Apps\lab3> kubectl delete pod nginx-96qnn

Error from server (NotFound): pods "nginx-96qnn" not found

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Buliding Scalable Blockchain Apps\lab3> kubectl delete pod nginx-br5nj

pod "nginx-br5nj" deleted

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Buliding Scalable Blockchain Apps\lab3> kubectl delete pod nginx-fwzr5

pod "nginx-fwzr5" deleted

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Buliding Scalable Blockchain Apps\lab3>

Ln 15, Col 14 Spaces: 2 UTF-8 CRLF YAML Go Live

The screenshot shows a Visual Studio Code editor with a file explorer on the left and a terminal at the bottom. The file explorer shows a project named 'BCDV 4032 - BUILDING SCALABLE BLOCKCHAIN APPS' with a subdirectory 'Lab3' containing 'replicaset.yaml'. The terminal shows the following commands and output:

```
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl delete pod nginx-96qnn
pod "nginx-96qnn" deleted
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl delete pod nginx-br5nj
pod "nginx-br5nj" deleted
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl delete pod nginx-fwzr5
pod "nginx-fwzr5" deleted
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl get pods
NAME          READY   STATUS    RESTARTS   AGE
nginx-2tj6d   1/1     Running   0           55s
nginx-6cpm    1/1     Running   0           43s
nginx-pfrwm   1/1     Running   0           84s
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl delete pod nginx-fwzr5
Error from server (NotFound): pods "nginx-fwzr5" not found
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl get replicaset
NAME          DESIRED   CURRENT   READY   AGE
nginx         3         3         3       95m
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3>
```

The 'replicaset.yaml' file contains the following YAML:

```
apiVersion: apps/v1
kind: ReplicaSet
metadata:
  name: nginx
  labels:
    app: nginx
    tier: lb
spec:
  replicas: 3
  selector:
    matchLabels:
      tier: lb
  template:
```

Deployment yaml with replicaset

The screenshot shows a Visual Studio Code editor with a file explorer on the left and a terminal at the bottom. The file explorer shows a project named 'BCDV 4032 - BUILDING SCALABLE BLOCKCHAIN APPS' with a subdirectory 'Lab3' containing 'deployment.yaml'. The terminal shows the following commands and output:

```
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl get pods
nginx-2tj6d   1/1     Running   0           55s
nginx-pfrwm   1/1     Running   0           84s
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl delete pod nginx-fwzr5
Error from server (NotFound): pods "nginx-fwzr5" not found
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl get replicaset
NAME          DESIRED   CURRENT   READY   AGE
nginx         3         3         3       95m
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl get deployments
No resources found in default namespace.
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl apply -f deployments.yaml
error: the path "deployments.yaml" does not exist
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl apply -f deployment.yaml
deployment.apps/nginx-deployment created
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl get deployments
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
nginx-deploy  3/3     1             3           6s
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3>
```

The 'deployment.yaml' file contains the following YAML:

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: nginx
  labels:
    app: nginx
spec:
  replicas: 3
  selector:
    matchLabels:
      app: nginx
  template:
    metadata:
      labels:
        app: nginx
    spec:
      containers:
      - name: nginx
        image: nginx:1.14.2
        ports:
        - containerPort: 80
```

StatefulSet YAML

```
1 apiVersion: v1
2 kind: Service
3 metadata:
4   name: nginx
5   labels:
6     app: nginx
7 spec:
8   ports:
9     - port: 80
10     name: web
11   clusterIP: None
12   selector:
13     app: nginx
14 ---
15 apiVersion: apps/v1
16 kind: StatefulSet
17 metadata:
18   name: web
19 spec:
20   selector:
21     matchLabels:
22       app: nginx # has to match .spec.template.metadata.labels
23   serviceName: "nginx"
```

```
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl apply -f statefulset.yaml
service/nginx created
statefulset.apps/web created
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl get statefulsets
NAME READY AGE
web 0/3 20s
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3>
```

DaemonSet YAML.

```
1 apiVersion: apps/v1
2 kind: DaemonSet
3 metadata:
4   name: nginx
5 spec:
6   selector:
7     matchLabels:
8       name: nginx-lb
9   template:
10     metadata:
11       labels:
12         name: nginx-lb
13     spec:
14       containers:
15         - name: nginx
16           image: nginx
```

```
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl apply -f daemonset.yaml
daemonset.apps/nginx created
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl get daemonset
error: the server doesn't have a resource type "daemonset"
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl get daemonsets
error: the server doesn't have a resource type "daemonsets"
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl get daemonset
NAME DESIRED CURRENT READY UP-TO-DATE AVAILABLE NODE SELECTOR AGE
nginx 1 1 1 1 1 <none> 2m34s
PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3>
```

Deployment example with resource limits

The screenshot shows the Visual Studio Code editor with the file explorer on the left displaying a project structure for 'BCDV 4032 - BUILDING SCALABLE BLOCKCHAIN APPS'. The file explorer shows a hierarchy with 'Lab1', 'LAB2', and 'Lab3'. Under 'Lab3', there are several YAML files: 'deamonset.yaml', 'deployment-resource.yaml', 'deployment.yaml', 'replicasets.yaml', 'statefulsets.yaml', and 'kubectlexe'. The 'deployment-resource.yaml' file is selected and its content is visible in the editor. The content is a Kubernetes Deployment manifest for an nginx service. The terminal at the bottom shows the command 'kubectl apply -f deployment-resource.yaml' being executed, followed by 'kubectl get deployments', which shows the deployment is in a 'READY' state. The status bar at the bottom indicates the file is 'deployment-resource.yaml' and the terminal is running 'powershell'.

```
1 apiVersion: apps/v1
2 kind: Deployment
3 metadata:
4   name: nginx-deployment
5   labels:
6     app: nginx
7 spec:
8   replicas: 3
9   selector:
10    matchLabels:
11      app: nginx
12   template:
13     metadata:
14       labels:
15         app: nginx
16     spec:
17       containers:
18         - name: nginx
19           image: nginx:1.14.2
20           ports:
21             - containerPort: 80
22       resources:
23         limits:
```

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl apply -f deployment-resource.yaml

deployment.apps/nginx-deployment configured

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl get deployments

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
nginx-deployment	3/3	3	3	18m

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3>

Deployment with health checks

The screenshot shows the Visual Studio Code editor with the file explorer on the left displaying the same project structure as the previous image. The 'Deployment-health-checks.yaml' file is selected and its content is visible in the editor. The content is a Kubernetes Deployment manifest for an nginx service, similar to the previous one, but it includes a 'livenessProbe' section. The terminal at the bottom shows the command 'kubectl apply -f deployment-health-checks.yaml' being executed, followed by 'kubectl get deployments', which shows the deployment is in a 'READY' state. The status bar at the bottom indicates the file is 'Deployment-health-checks.yaml' and the terminal is running 'powershell'.

```
1 Deployment-health-checks.yaml
2 apiVersion: apps/v1
3 kind: Deployment
4 metadata:
5   name: nginx-deployment
6   labels:
7     app: nginx
8 spec:
9   replicas: 3
10  selector:
11    matchLabels:
12      app: nginx
13  template:
14    metadata:
15      labels:
16        app: nginx
17    spec:
18      containers:
19        - name: nginx
20          image: nginx:1.14.2
21          ports:
22            - containerPort: 80
23          livenessProbe:
24            httpGet:
```

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl apply -f deployment-health-checks.yaml

deployment.apps/nginx-deployment configured

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> kubectl get deployments

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
nginx-deployment	3/3	1	3	21m

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3>

Full stack Application Deployment

File Edit Selection View Go Run ...

BCDV 4032 - Building Scalable Blockchain Apps

EXPLORER

- BCDV 4032 - BUILDING SCALABLE BLOCKCHAIN...
- Lab1
- LAB2
- Lab3
 - kubernetes-demo
 - kubernetes
 - deployments
 - secrets
 - services
 - stateful-sets
 - docker-compose.yml
 - README.md
 - resthttp
 - ~\$creenshots.docx
 - ! daemonset.yml
 - ! Deployment-health-checks.yaml
 - ! deployment-resource.yaml
 - ! deployment.yaml
 - ! replicaset.yml
 - ! screenshots.docx
 - ! statefulset.yml
 - ! kubectlexe
 - ! Lab1 Screenshots.docx

OUTLINE

TIMELINE

Deployment-health-checks.yaml

```
26 initialDelaySeconds: 15
27 periodSeconds: 10
28 readinessProbe:
29 httpGet:
30 path: /
31 port: 80
32 initialDelaySeconds: 5
33 periodSeconds: 5
34
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3> cd .\kubernetes-demo\kubernetes\

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3\kubernetes-demo\kubernetes> ^C

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3\kubernetes-demo\kubernetes> kubectl apply -f secrets/mongodb-secret.yml

secret/mongodb-secret created

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3\kubernetes-demo\kubernetes> kubectl apply -f stateful-sets/mongodb-stateful-set.yml

statefulset.apps/mongodb-stateful-set created

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3\kubernetes-demo\kubernetes> kubectl apply -f services/mongodb-service.yml

service/mongodb-service created

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3\kubernetes-demo\kubernetes> kubectl apply -f deployments/note-server-depl.yml

deployment.apps/note-server-depl created

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3\kubernetes-demo\kubernetes> kubectl get pods

NAME	READY	STATUS	RESTARTS	AGE
mongodb-stateful-set-0	0/1	ContainerCreating	0	33s
note-server-deployment-6fb5fcb67f-97qpg	0/1	ContainerCreating	0	9s
note-server-deployment-6fb5fcb67f-ngk5s	0/1	ContainerCreating	0	9s

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3\kubernetes-demo\kubernetes>

Ln 34, Col 1 Spaces: 2 UTF-8 CRLF YAML Go Live

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BCDV 4032 - Building Scalable Blockchain Apps

EXPLORER

- BCDV 4032 - BUILDING SCALABLE BLOCKCHAIN...
- Lab1
- LAB2
- Lab3
 - kubernetes-demo
 - kubernetes
 - deployments
 - secrets
 - services
 - stateful-sets
 - docker-compose.yml
 - README.md
 - resthttp
 - ~\$creenshots.docx
 - ! daemonset.yml
 - ! Deployment-health-checks.yaml
 - ! deployment-resource.yaml
 - ! deployment.yaml
 - ! replicaset.yml
 - ! screenshots.docx
 - ! statefulset.yml
 - ! kubectlexe
 - ! Lab1 Screenshots.docx

OUTLINE

TIMELINE

Deployment-health-checks.yaml

```
26 initialDelaySeconds: 15
27 periodSeconds: 10
28 readinessProbe:
29 httpGet:
30 path: /
31 port: 80
32 initialDelaySeconds: 5
33 periodSeconds: 5
34
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3\kubernetes-demo\kubernetes> kubectl get pods

NAME	READY	STATUS	RESTARTS	AGE
mongodb-stateful-set-0	0/1	ContainerCreating	0	33s
note-server-deployment-6fb5fcb67f-97qpg	0/1	ContainerCreating	0	9s
note-server-deployment-6fb5fcb67f-ngk5s	0/1	ContainerCreating	0	9s

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3\kubernetes-demo\kubernetes> kubectl apply -f services/note-server-service.yml

service/note-server-service created

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3\kubernetes-demo\kubernetes> kubectl apply -f deployments/note-depl.yml

deployment.apps/note-depl created

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3\kubernetes-demo\kubernetes> kubectl get pods

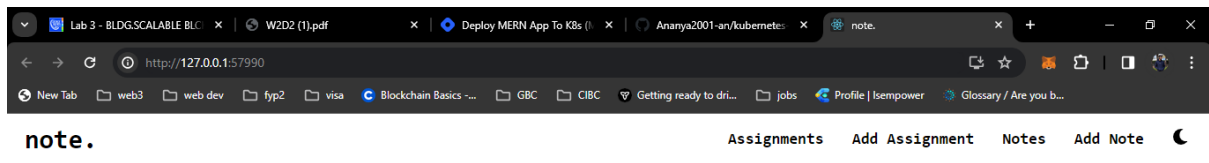
NAME	READY	STATUS	RESTARTS	AGE
mongodb-stateful-set-0	1/1	Running	0	4m5s
mongodb-stateful-set-1	0/1	ContainerCreating	0	2m26s
note-deployment-74cc946cd8-2hjnb	0/1	ContainerCreating	0	8s
note-deployment-74cc946cd8-8jrmf	0/1	ContainerCreating	0	8s
note-server-deployment-6fb5fcb67f-97qpg	0/1	ContainerCreating	0	3m41s
note-server-deployment-6fb5fcb67f-ngk5s	0/1	ContainerCreating	0	3m41s

PS C:\Users\Faizan\Desktop\Blockchain Development\BCDV 4032 - Building Scalable Blockchain Apps\lab3\kubernetes-demo\kubernetes>

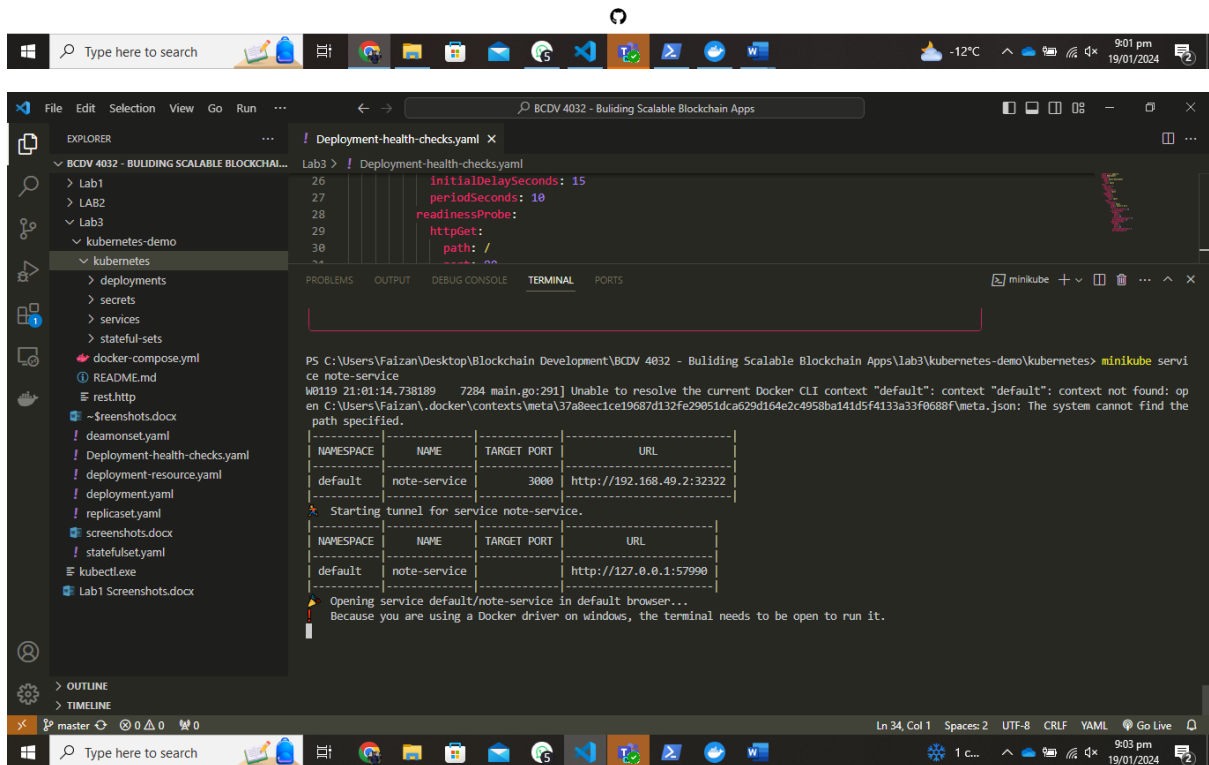
Ln 34, Col 1 Spaces: 2 UTF-8 CRLF YAML Go Live

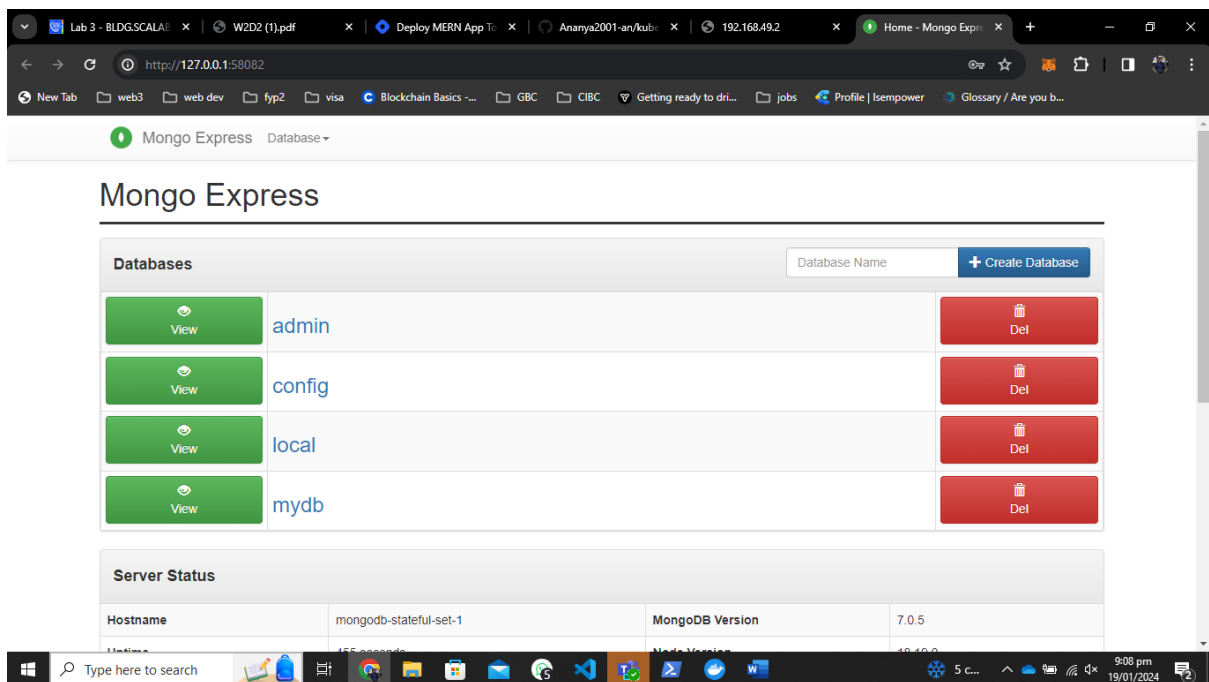
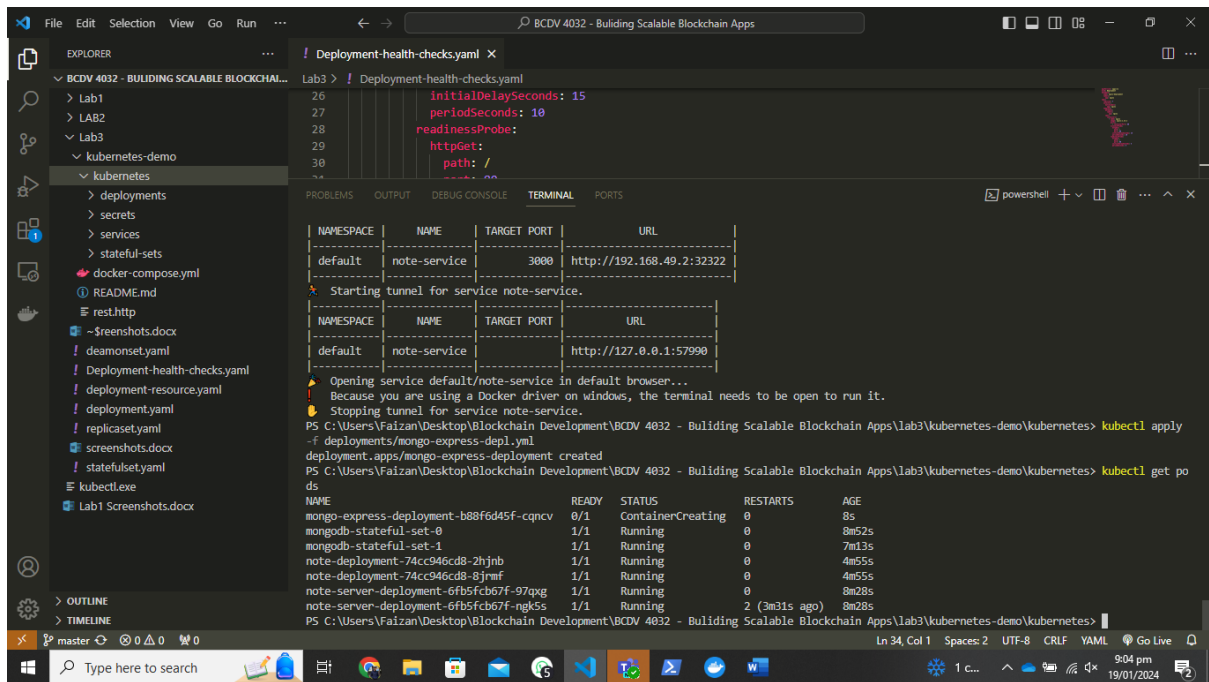
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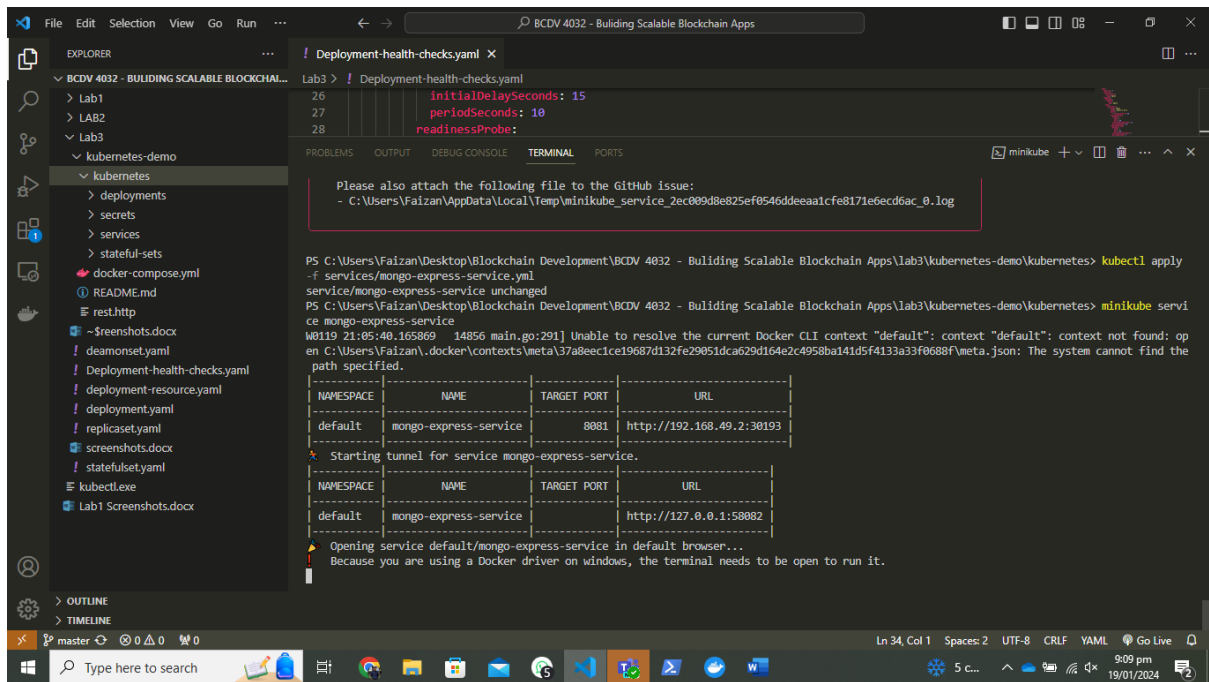
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Important Assignments







Bring down note-depp pod. Demonstrate using screenshot if a new pod has started.

